



MODEL VFB2 ELECTRIC COUNTER-STYLE *FLASHBAKE*® OVEN

ML 126582

- NOTICE -

This Manual is prepared for the use of trained Vulcan Service Technicians and should not be used by those not properly qualified. If you have attended a Vulcan Service School for this product, you may be qualified to perform all the procedures described in this manual.

This manual is not intended to be all encompassing. If you have not attended a Vulcan Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Vulcan Service Technician.

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GENERAL

INTRODUCTION

General

The *FlashBake*® oven is a versatile oven that employs a revolutionary high quality, high speed cooking technology. The baking process is so fast that food retains its natural juices. Bread products brown and become crisp while vegetables retain their color and texture. The texture, appearance and quality of food cooked in this oven is superior to that provided by any other method of cooking.

In conventional ovens, the cooking process occurs by transferring heat energy from the air inside the oven into the food. Hot surfaces inside the oven also transfer heat directly into the food by conduction. In convection ovens, the air-to-food heat transfer is enhanced by the uniform circulation of the heated air around the food. Forced air ovens blow the heated air directly onto the food, providing marginal increases in cooking speeds.

FlashBake® ovens use visible and infrared light energy to cook by radiative heat transfer. The infrared energy browns the surface of the food, while the visible light energy penetrates and heats it internally. Using the proper combination of visible and infrared light energy, the *FlashBake*® oven provides efficient, high-speed baking and high-quality food.

Eight 1,000 watt quartz halogen lamps, four on top and four on the bottom, cycle in a circular motion to promote even browning.

Oven has a pan sensor in the bottom of oven cavity which reads pan reflectivity and automatically adjusts halogen lamps to achieve optimal cooking results.

ELECTRICAL SPECIFICATIONS

120 volt, 60 Hz, single phase, 15 amp power supply with cord and plug.

INSTALLATION

Refer to the INSTALLATION AND OPERATION MANUAL shipped with the oven for installation instructions.

OPERATION

Refer to the INSTALLATION AND OPERATION MANUAL shipped with the oven for complete operating instructions, precautions and utensils to use.

CLEANING

CAUTION: Never use oven cleaners to clean the oven. Never use abrasives or sharp objects on the oven walls or window.

Refer to the INSTALLATION AND OPERATION MANUAL shipped with the oven for complete cleaning instructions.

TOOLS

- Standard set of hand tools
- VOM with AC current tester (Any VOM with a sensitivity of at least 20,000 ohms per volt)

Special Tools

- RTV #732 Part #513886
- Blue Shower II cleaner Part #547240
- Jumper Plug Part # 252289
- Pin Extraction Tool for MOLEX® MINI-FIT JR.™ Connectors

REMOVAL AND REPLACEMENT OF PARTS

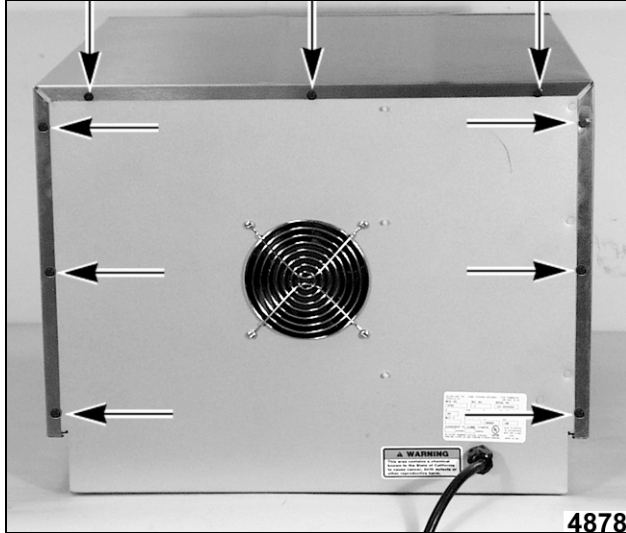
CAUTION: Handle all reflective parts and interior door glass carefully to prevent scratching or marking of surfaces.

COVERS AND PANELS

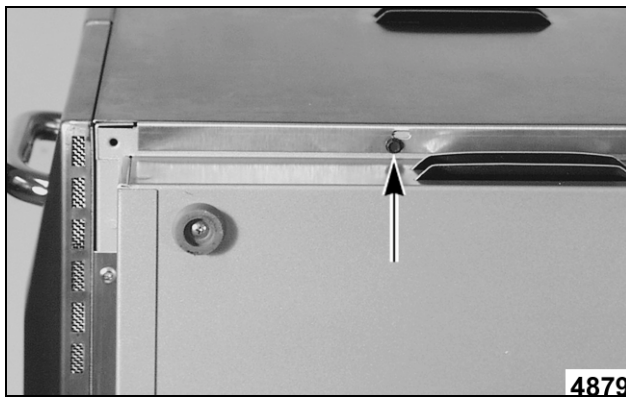
WARNING: UNPLUG THE MAIN POWER CORD.

Main Cover

1. Remove screws securing cover at rear of unit.



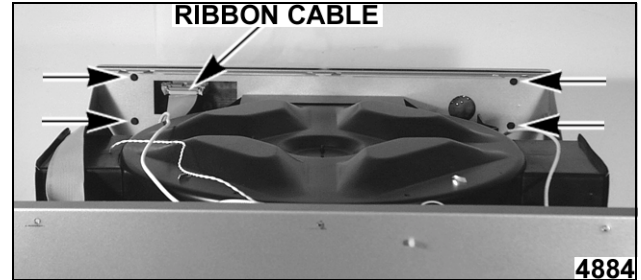
2. Remove one screw securing each side of cover located underneath side of unit.



3. Slide cover rearward to disengage cover from front top and front sides of unit.
4. Carefully lift cover off unit.
5. Reverse procedure to install.

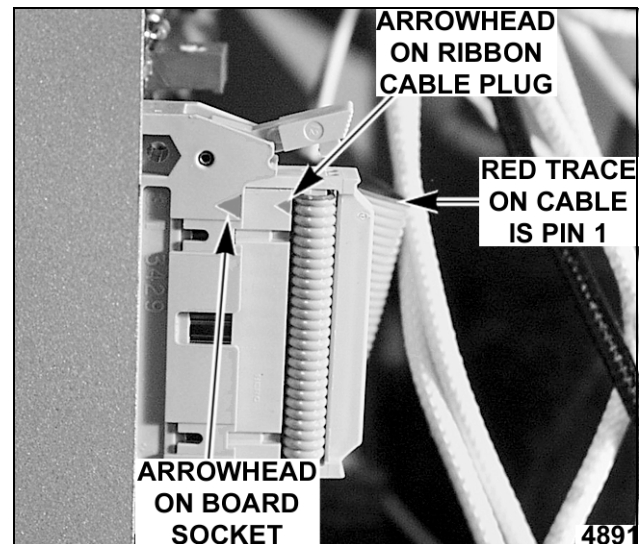
Control Panel

1. Remove "MAIN COVER".
2. Unplug ribbon cable from rear of panel.
3. Remove screws securing panel from rear.



4. Reverse procedure to install.

NOTE: When reconnecting ribbon cable, be sure to line up arrowheads as shown in picture. They designate pin 1. The red trace on the cable also designates pin 1.

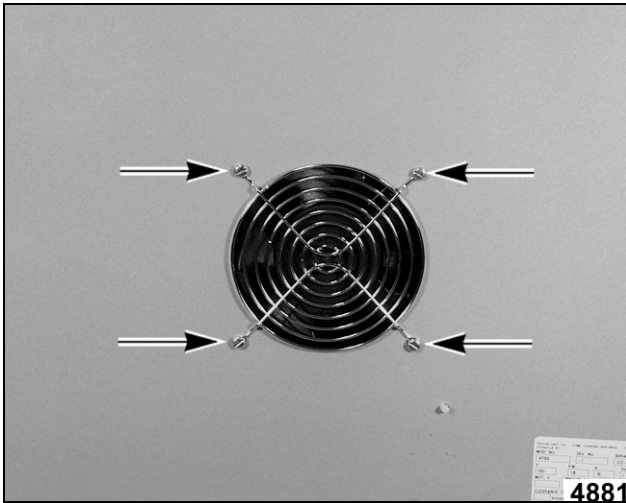


FAN**WARNING: UNPLUG THE MAIN POWER CORD.**

1. Remove "MAIN COVER".
2. Disconnect wires from fan.



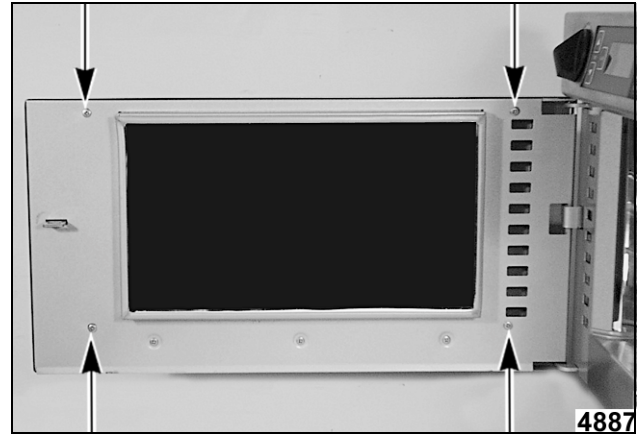
3. Remove screws securing fan and guard.



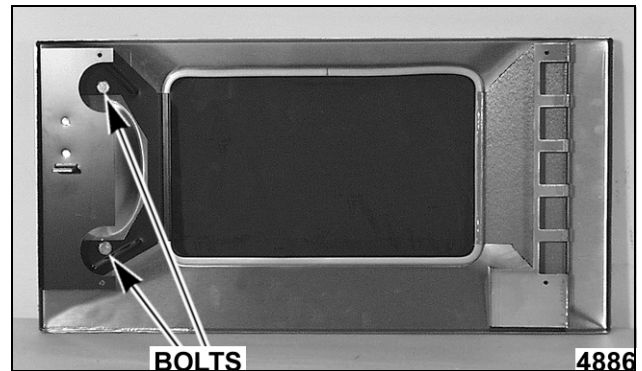
4. Remove fan and guard.
5. Reverse procedure to install.

DOOR**WARNING: UNPLUG THE MAIN POWER CORD.**

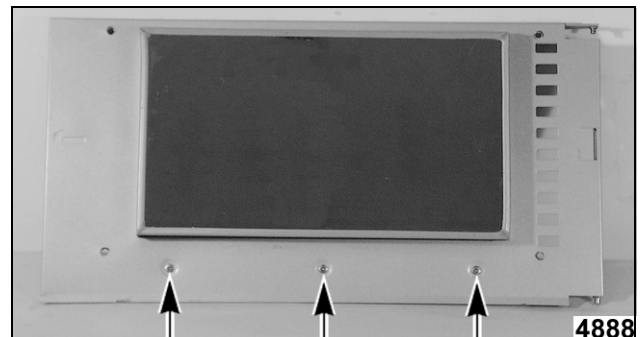
1. Remove four screws securing outer door assembly and remove outer half.



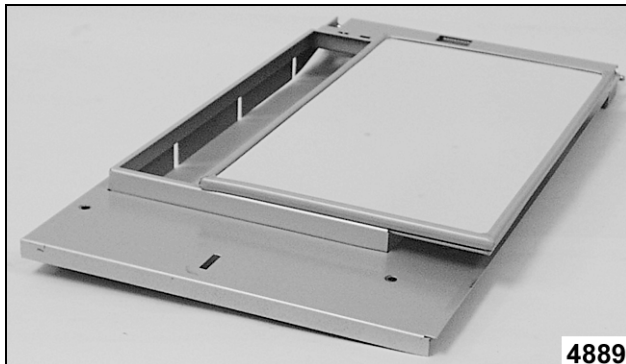
2. To replace door handle, door latch or outer door window and window gasket:
 - A. Remove two bolts securing door handle.



3. Remove inner door assembly by swinging to the open position and lifting off hinge.
4. To remove inner door window and window gasket:
 - A. Remove three screws securing lower window bracket and remove bracket.



- B. Slide window and gasket out of door.



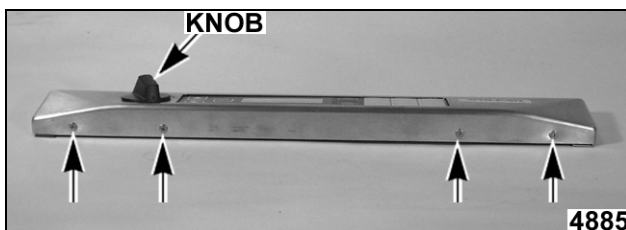
5. Reverse procedure to install.

DISPLAY, KEYPAD ASSEMBLY

WARNING: UNPLUG THE MAIN POWER CORD.

CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Remove "MAIN COVER".
2. Remove "CONTROL PANEL".
3. Pull off rotary switch knob.
4. Remove screws securing lower circuit board bracket and remove bracket.



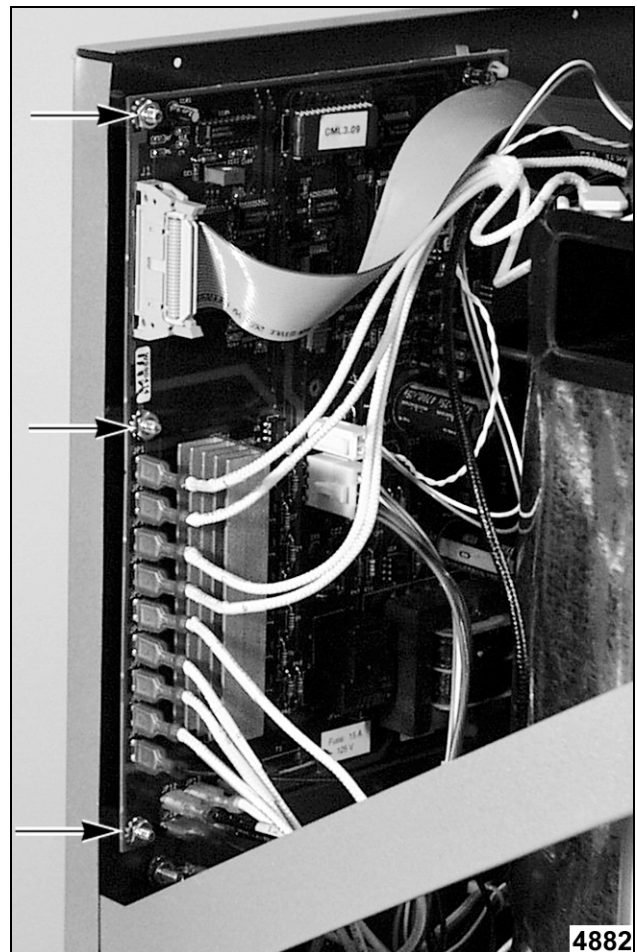
5. Carefully work circuit board assembly out of panel.
6. Reverse procedure to install.

CONTROL BOARD

WARNING: UNPLUG THE MAIN POWER CORD.

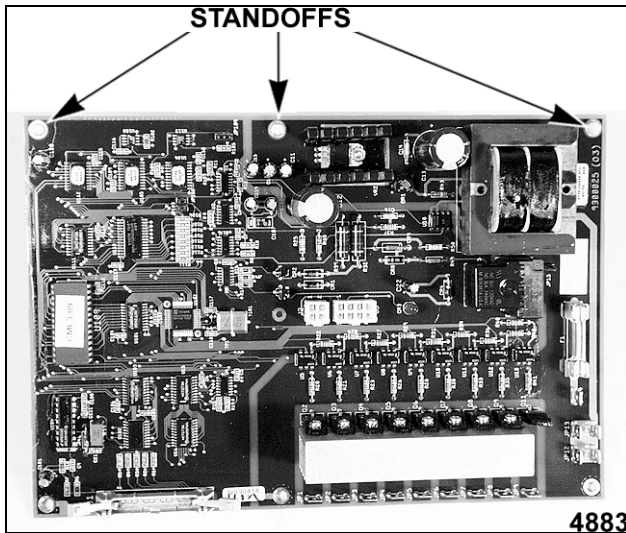
CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Remove "MAIN COVER".
2. Identify and disconnect all wires and plugs from control board.
3. Remove nuts and washers securing board to standoffs.



4. Squeeze tabs on standoffs and push standoffs through back panel. Support control board so that it does drop and remove control board.

5. Squeeze tabs on standoffs and push standoffs out of control board.



6. Reverse procedure to install.

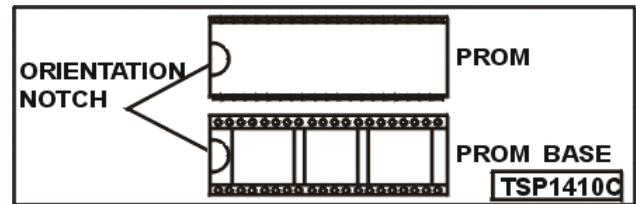
CONTROL BOARD PROMS

WARNING: UNPLUG THE MAIN POWER CORD.

CAUTION: Certain components in this system are subject to damage by electrostatic discharge during field repairs. A field service grounding kit is available to prevent damage. The field service grounding kit must be used anytime the control board is handled.

1. Remove "MAIN COVER".
2. Note prom orientation, then carefully remove prom by prying out of socket.

NOTE: Look for a notch or other identifying mark that indicates the prom end with pin1.



3. Insert new prom being sure orientation is correct. Insure that pins do not get bent.
4. Install main cover.

UPPER LAMP HOUSING ASSEMBLY

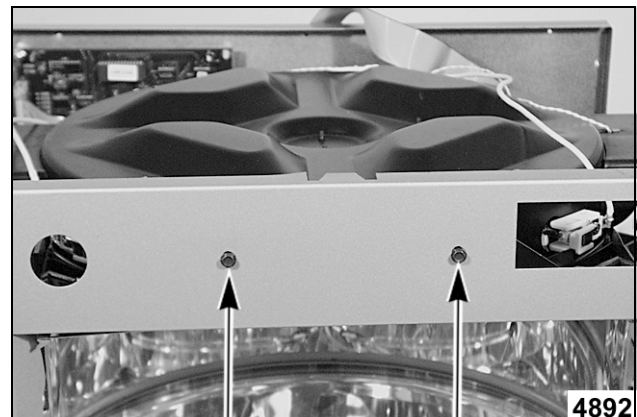
NOTE: When upper lamp housing is removed for any reason, inspect lamp sockets and center post contact plate for pitting due to bad connections and replace parts as required.

WARNING: UNPLUG THE MAIN POWER CORD.

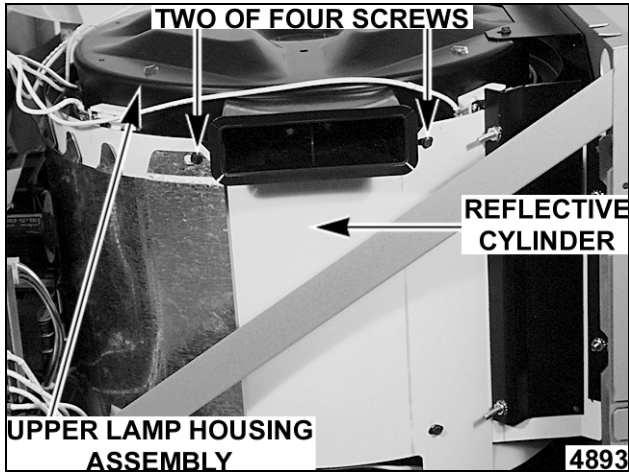
Parts that can be accessed when upper housing is removed:

- ring reflector and gasket
- glass and gasket
- lamps and lamp sockets
- center post with lamp contact plate
- lamp reflector
- thermostat

1. Remove "MAIN COVER".
2. Remove "CONTROL PANEL".
3. Remove "DOOR".
4. Disconnect wires and plugs that connect upper housing assembly to control board.
5. Remove screws securing upper housing bracket.



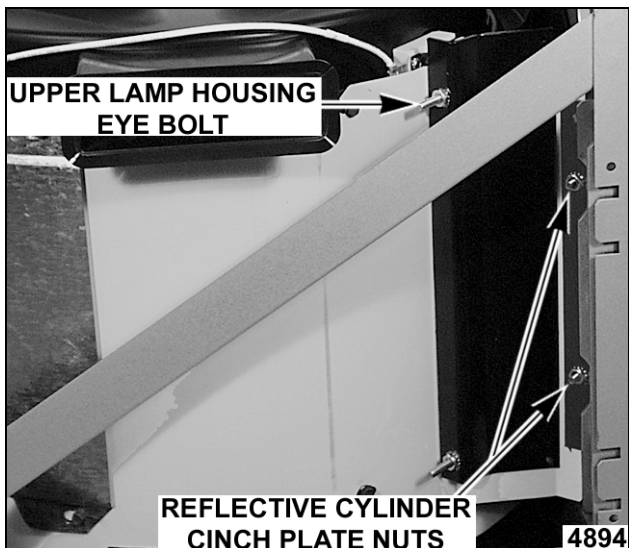
6. Remove 4 screws securing upper housing assembly to reflective cylinder.



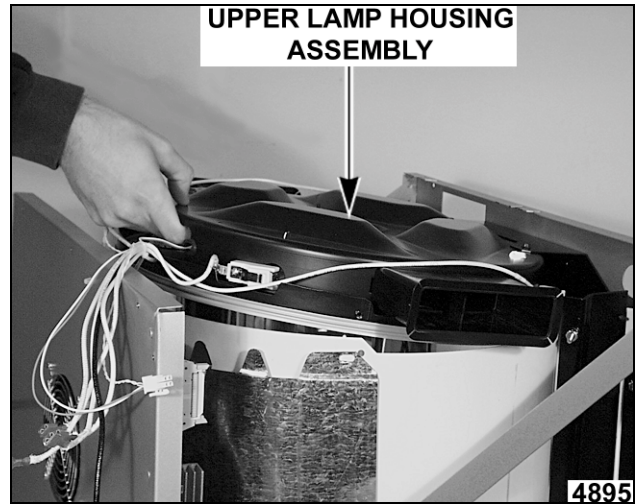
7. Remove nuts on both upper housing eye bolts and remove eye bolts.

NOTE: On reassembly, tighten nuts on eye bolts to approximately 3/4" exposed threads.

8. Loosen two nuts securing both reflective cylinder cinch plates.



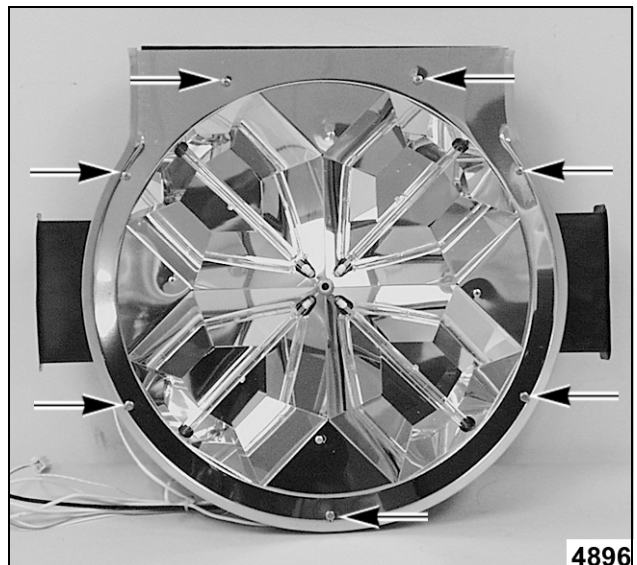
9. Lift rear of housing assembly out of reflective cylinder and then carefully work the rest of the housing out of the cylinder.



10. Reverse procedure to install.

Lamps (Upper)

1. Remove "UPPER LAMP HOUSING ASSEMBLY".
2. Remove 7 screws securing reflector ring to upper housing.



3. Remove reflector ring and ring gasket. Watch for shoulder washers under ring.

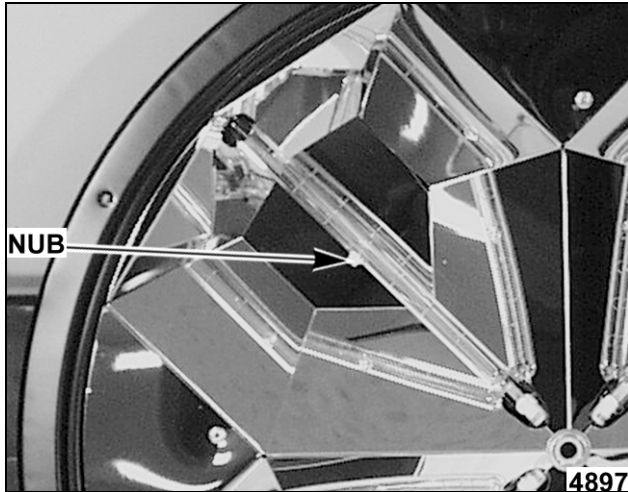
NOTE: When reassembling, shoulder on washer goes into screw hole in ring from bottom side of ring.

4. Lift out glass with glass gasket.

5. Remove lamps by pushing lamps away from center post to disengage them from center post and then lift out of housing.

CAUTION: Use clean dry cloth to handle lamps. DO NOT get finger prints or any other residue on lamps because the lamp life will be shortened. Clean cold lamps with a cloth moistened with alcohol cleaner to remove skin oil or other residue.

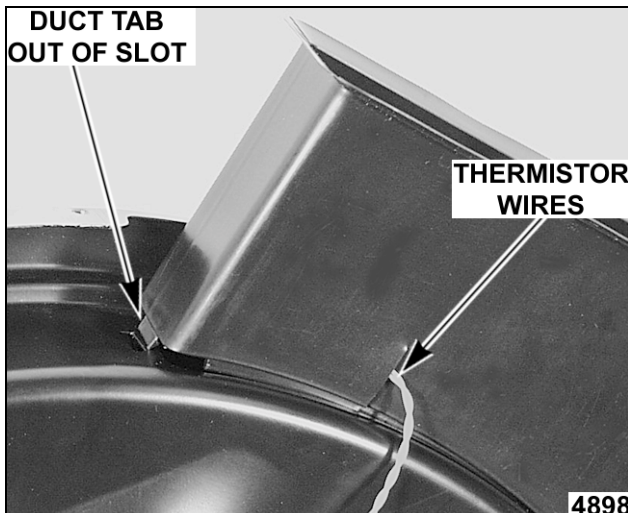
NOTE: When installing lamps, nub on lamp should be on either side of lamp, not on top or bottom of lamp.



6. Reverse procedure to install.

Exhaust Ducts, Thermistor

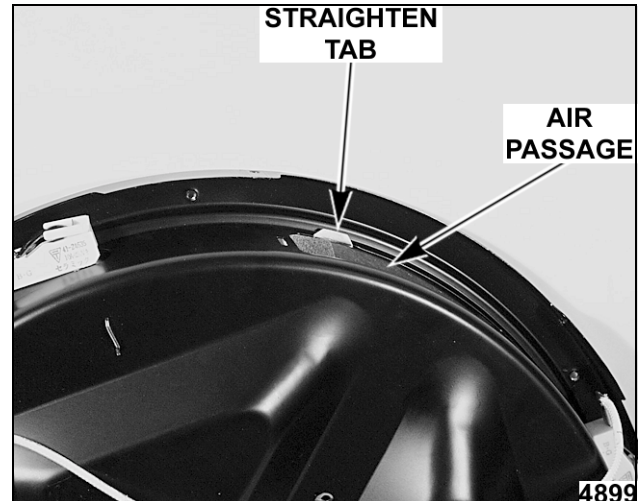
1. Remove "MAIN COVER".
2. Remove exhaust ducts by releasing tab in slot. Press from inside duct in an outward direction to disengage tab and pull out of slot.
3. To change thermistor, remove thermistor wires from duct by sliding wires out of slit in duct. Extract thermistor pins out of J2 with pin extraction tool.



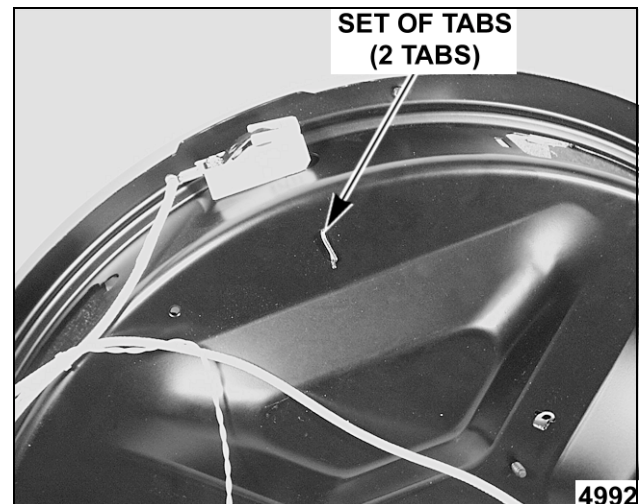
4. Reverse procedure to install.

Lamp Reflector (Upper)

1. Remove "LAMPS".
2. Remove "EXHAUST DUCTS".
3. Straighten 4 tabs (1 in each air passage) securing lamp reflector to housing.



4. Straighten 4 sets of reflector tabs securing reflector thru housing slots.



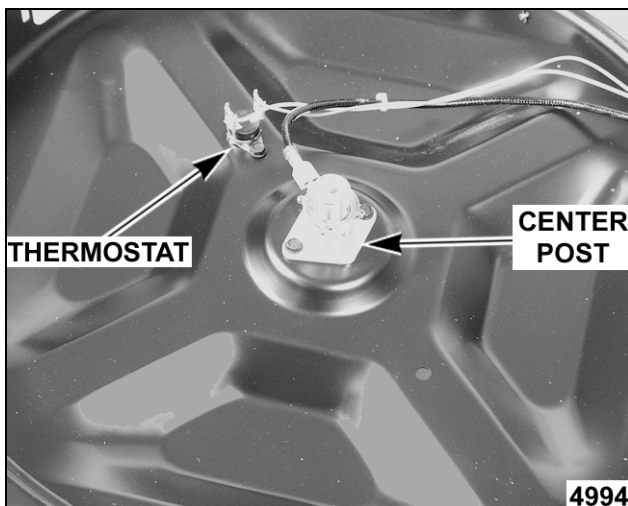
5. Carefully work reflector out by lifting outer edges to enable center of reflector to separate and come out from under washer on center post.



6. Reverse procedure to install. Be sure reflector is under washer on center post before reflector tabs are bent. If not under washer, there will not be sufficient clearance to insert lamps into lamp socket.
7. Clean reflector with a cloth moistened with Blue Shower cleaner to remove skin oil or other residue. Buff dry with clean dry cloth to remove any smears.

Center Post and/or Thermostat (Upper)

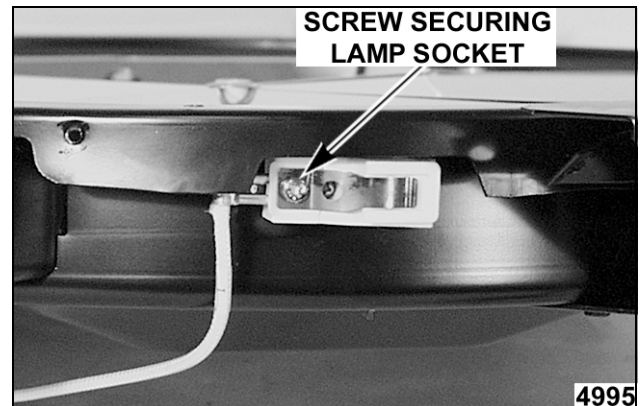
1. Remove "LAMP REFLECTOR".
2. Disconnect wire and remove screws securing center post assembly.
3. Disconnect wires from thermostat and remove screw securing thermostat.



4. Reverse procedure to install. Do not over tighten center post screws.

Lamp Socket (Upper)

1. Remove "LAMPS".
2. Disconnect wire from lamp socket being removed.
3. Remove screw securing lamp socket and remove socket.



4. Reverse procedure to install. Do not over tighten lamp socket mounting screws.

LOWER LAMP HOUSING ASSEMBLY

NOTE: When lower lamp housing is removed for any reason, inspect lamp sockets and center post contact plate for pitting due to bad connections and replace parts as required.

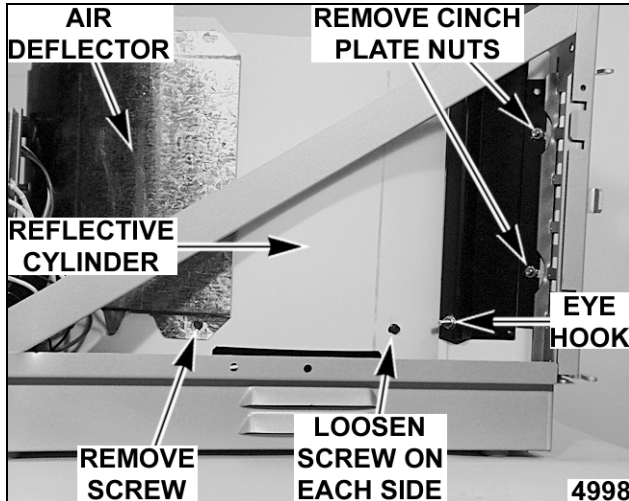
WARNING: UNPLUG THE MAIN POWER CORD.

Parts that can be accessed when lower housing is removed:

- reflector ring
- glass and glass/apron gasket
- lamps and lamp sockets
- center post with lamp contact plate and pan sensor
- lamp reflector
- thermostat

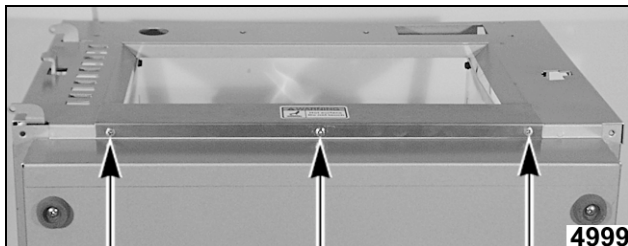
1. Remove "UPPER LAMP HOUSING ASSEMBLY".

2. Remove 1 screw on each side and remove air deflector.
3. Loosen 1 screw each side securing reflective cylinder to lower lamp housing.
4. Remove nut on eye hook on each side.
5. Remove "DOOR LATCH".
6. Remove 2 reflective cylinder cinch plate nuts on each side.



7. Remove screws loosened in step 3 and carefully lift out reflective cylinder.
8. Remove screws securing apron and carefully withdraw apron from gasket.

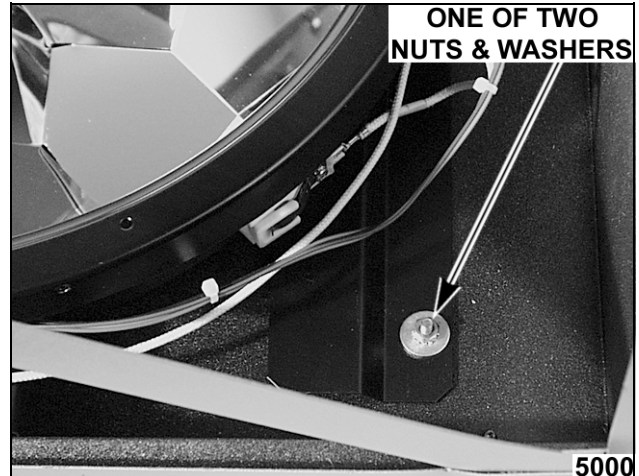
NOTE: If you tilt unit back to access screws, use a block to support back of unit to prevent damaging power cord strain relief.



9. Lift out glass with gasket.

NOTE: If gasket is to be replaced, remove it from glass and clean off any gasket material that may be stuck to glass. Use RTV 732 around edge of glass to seal new gasket to glass.

10. Remove 2 nuts and washers securing lower housing bracket to base of unit.



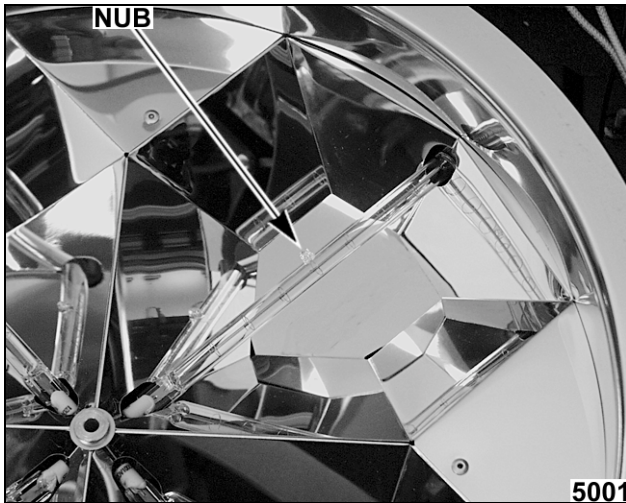
11. Disconnect lower lamp housing wires and plugs from control board.
12. Lift lower lamp housing assembly out of unit.
13. Reverse procedure to install components leaving mounting screws and nuts loose.
 - A. Tighten nuts on eye bolts to draw reflective cylinder snug around upper and lower housing assemblies. Tighten nuts until there is approximately 3/4" of exposed threads on eye bolts.
 - B. Tighten screws securing air deflector and cylinder to upper and lower housings.
 - C. Manually push housing/cylinder assembly to front of unit and hold there while tightening cylinder cinch plate nuts.
 - D. Tighten screws on upper housing mounting bracket.
 - E. Tighten nuts and washers securing lower housing bracket to base of unit.

Lamps (Lower)

1. Perform removal procedure "LOWER LAMP HOUSING ASSEMBLY" steps 1 thru 9.
2. Remove lamps by pushing lamps away from center post to disengage them from center post and then lift out of housing.

CAUTION: Use clean dry cloth to handle lamps. DO NOT get finger prints or any other residue on lamps because the lamp life will be shortened. Clean cold lamps with a cloth moistened with alcohol cleaner to remove skin oil or other residue.

NOTE: When installing lamps, nub on lamp should be on either side of lamp, not on top or bottom of lamp.



3. Reverse procedure to install.

Lamp Reflector (Lower)

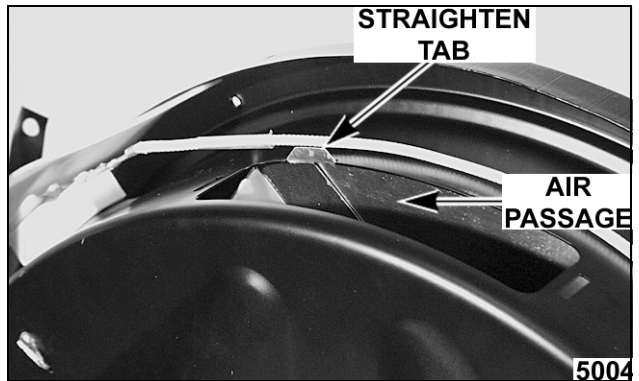
1. Remove "LAMPS".
2. Perform remaining removal steps in "LOWER LAMP HOUSING ASSEMBLY".
3. Lift out reflector ring.



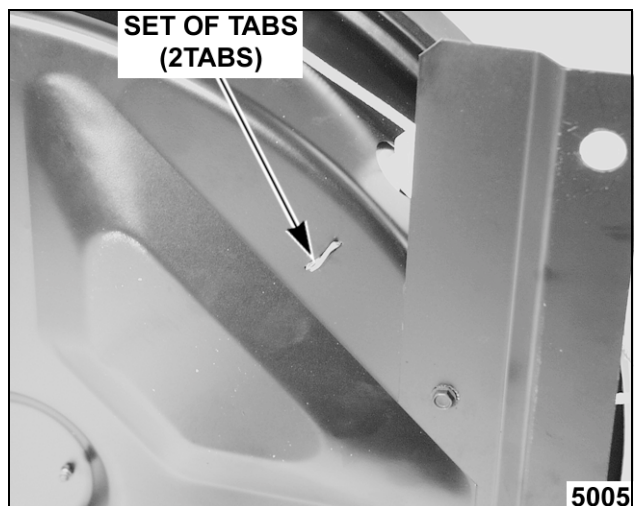
4. Remove exhaust ducts by releasing tab in slot. Press from inside duct in an outward direction to disengage tab and pull out of slot.



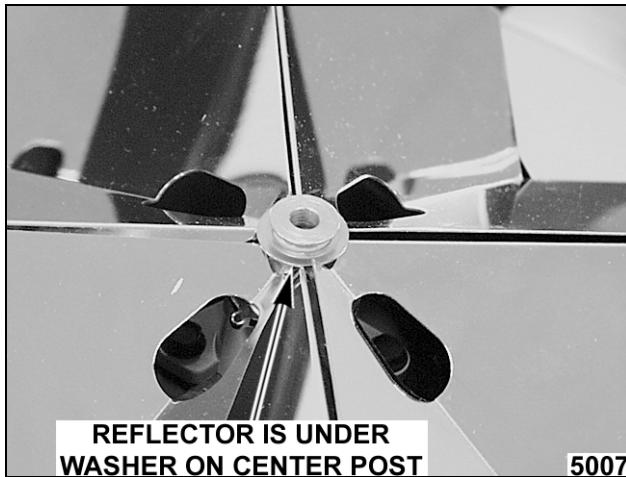
5. Straighten 4 tabs (1 in each air passage) securing lamp reflector to housing.



6. Straighten 4 sets of reflector tabs securing reflector thru housing slots.



7. Carefully work reflector out by lifting outer edges to enable center of reflector to separate and come out from under washer on center post.

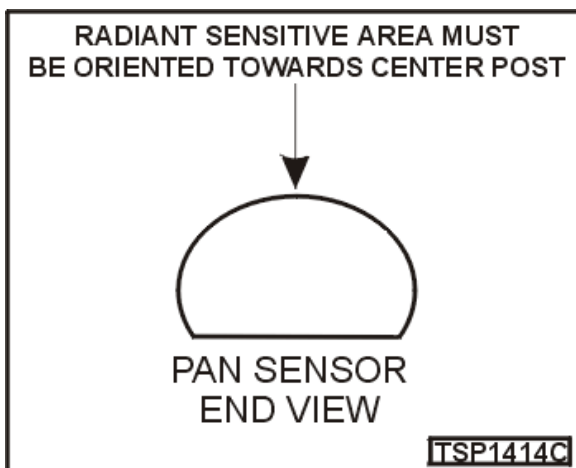


8. Reverse procedure to install. Be sure reflector is under washer on center post before reflector tabs are bent. If not under washer, there will not be sufficient clearance to insert lamps into lamp socket.
9. Clean reflector with a cloth moistened with Blue Shower cleaner to remove skin oil or other residue. Buff dry with clean dry cloth to remove any smears.

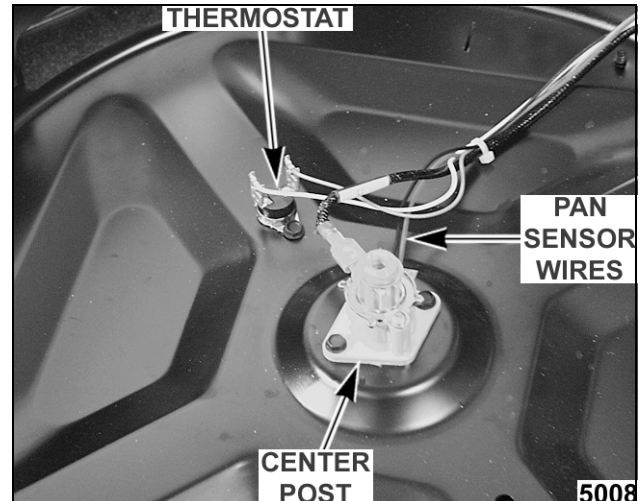
Center Post, Pan Sensor and/or Thermostat (Lower)

1. Remove "LAMP REFLECTOR".
2. Disconnect wire from center post and remove screws securing center post with pan sensor.
 - A. Cut wire ties to release pan sensor wires.
 - B. Extract sensor pins out of J3 with pin extraction tool.

NOTE: Orientation of pan sensor is curve side to the inside of center post.



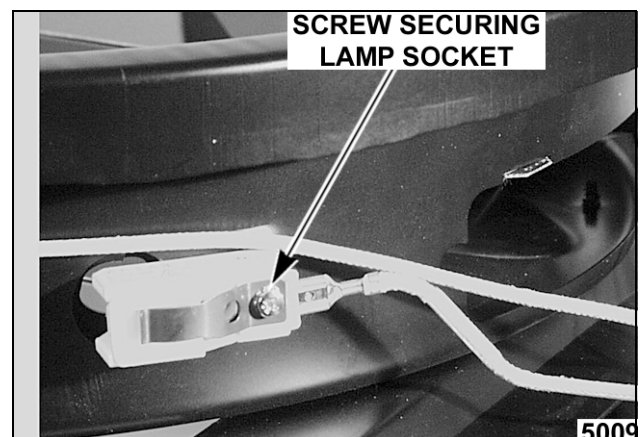
3. Disconnect wires from thermostat and remove screw securing thermostat.



4. Reverse procedure to install. Do not over tighten center post mounting screws.

Lamp Socket (Lower)

1. Remove "LAMPS".
2. Perform remaining removal steps in "LOWER LAMP HOUSING ASSEMBLY".
3. Disconnect wire from socket being replaced.
4. Remove screw securing lamp socket and remove socket.

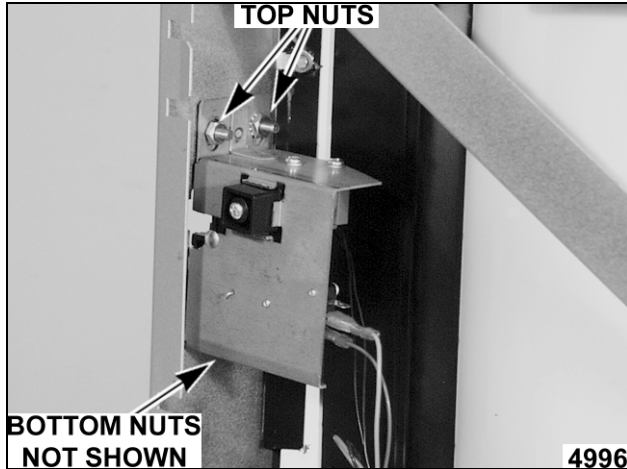


5. Reverse procedure to install. Do not over tighten lamp socket mounting screws.

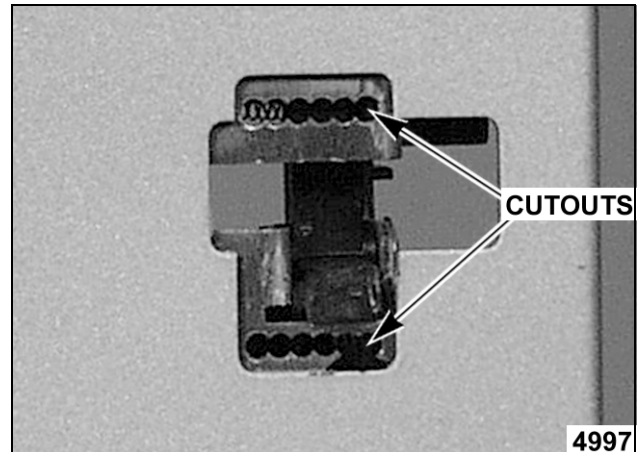
DOOR LATCH ASSEMBLY

WARNING: UNPLUG THE MAIN POWER CORD.

1. Remove "MAIN HOUSING".
2. Remove top nuts and loosen bottom nuts securing latch assembly to unit.



12. Press door bumper tabs into cutouts in latch assembly.



3. Pull latch assembly rearward to release door bumper and lift assembly off lower mounting studs.
4. To change solenoid, remove screws securing it.
5. Cut wire tie and disconnect wires from harness.
6. Remove screws securing switch.
7. Disconnect wires from switch.
8. Adjust switch as outlined in "DOOR SWITCH".
9. Reverse procedure to install.
10. Adjust assembly up or down to align with door striker.
11. Tighten latch assembly mounting nuts.

SERVICE PROCEDURES AND ADJUSTMENTS

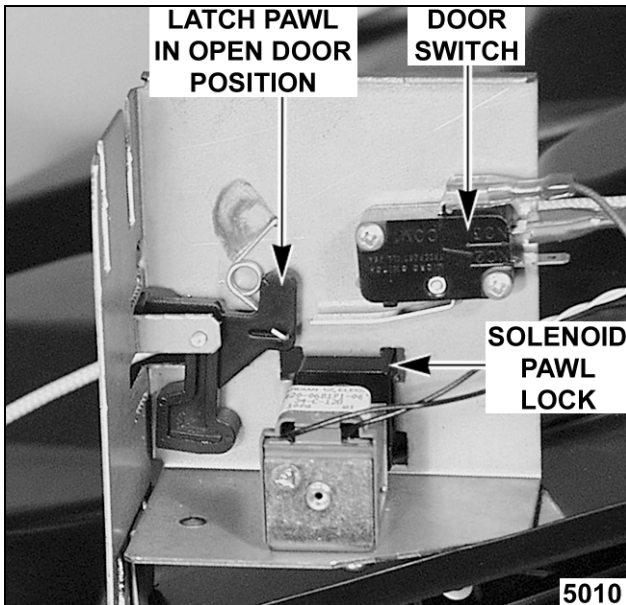
DOOR SWITCH

WARNING: UNPLUG THE MAIN POWER CORD.

When in a cook cycle, the door switch should not operate before the latch pawl contacts the energized solenoid pawl lock.

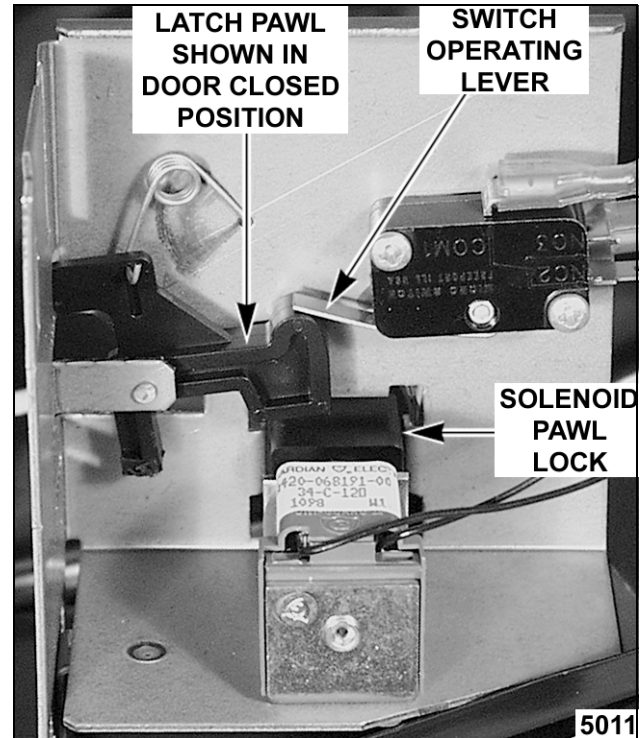
1. Perform steps 1 thru 3 in removal procedure "DOOR LATCH ASSEMBLY".

NOTE: Picture below shows latch pawl in the open door position.



2. Manually move latch pawl to "door closed position". Switch is operated.
3. Manually press solenoid pawl lock into the energized position and hold it there.
4. Manually move latch pawl towards open position until latch pawl contacts solenoid pawl lock. Switch should NOT unoperate. If adjustment is needed, reform switch operating lever.

NOTE: Switch may be tested in service diagnostics.



5. Manually move latch pawl to the open door position.
6. Reverse procedure to install.
7. Perform steps 10 thru 12 in removal procedure "DOOR LATCH ASSEMBLY".

THERMISTOR TEST

WARNING: UNPLUG THE MAIN POWER CORD.

1. Unplug J2 from control board.
2. Attach ohm meter leads to thermistor wires.
 - A. Reading should be approximately 125.5K ohms \pm 10% at room temperature (70°F).

PROM VERSION

To display installed prom version, unplug power cord from receptacle and wait a few seconds. Plug in power cord and watch display. It will momentarily display version of installed prom. Example (CML3.09)

SERVICE DIAGNOSTICS

To enter service diagnostics:

1. Remove "MAIN HOUSING".
2. Unplug power cord.
3. Install jumper on JP103 on control board.
4. Set selector knob to Brown.
5. Plug unit in.
 - A. Listen for two beeper tones.
 - B. Press any key and verify all display segments work.
 - C. Verify that blue display backlight is on.
6. Rotate knob to Bake.
 - A. Open and close door.
 - 1) Verify the sensor is working by observing change on display.
 - a. Display should read "Door CLOSED" when door is closed.
 - b. Display should read "Door OPEN" when door is open.
 - B. Display reads "Thermostat CLOSED".
 - C. Display reads "Eyeball sees: DARK".
7. Rotate knob to Preset.
 - A. Press Stop.
 - B. Press Start to start lamp test.
 - 1) Verify that all eight lamps turn on and off in sequence in a clockwise rotation.
8. Rotate knob to Cook.
 - A. Press 1 to test the door lock.
 - 1) Press Start to toggle the door lock on and off.
 - a. Verify that lock works by watching solenoid pawl lock move to lock and unlock positions.
 - 2) Press Stop.
 - B. Press 2 to test the fan.
 - 1) Press Start to toggle the fan on and off.
 - a. Verify that fan works and comes up to full speed.
 - 2) Press Stop.
 - C. Press 3 to test the pan sensor.
 - 1) Press Start to begin the sensor test.

- a. The display will report the values at the end of a 7 second test. Values reported for REFL, VOLT and TEMP should be between zero and 255. Values should not be zero or 255.
- b. Ignore the values on the right side of the display.

2) Press Stop.

9. Rotate knob to Grill.
 - A. Press Stop.
 - B. Rotate the knob to each position and verify the display matches each knob position.
 - C. Press each key (there are 14) and verify correct key is displayed.

NOTE: The Stop key must be pressed last.

10. Unplug the unit.
11. Remove jumper from JP103.
12. Install main housing.

PAN SENSOR CALIBRATION

NOTE: Oven must be clean and cooled down before starting calibration test.

1. Remove "MAIN HOUSING".
2. Plug unit in.
3. Set time to 1:00.
4. Set knob to Cook.
5. Press Start.
6. After 15 seconds, press Save.
7. Check the values reported on the display.
 - A. Verify that the voltage value is between 215 and 231.

NOTE: If the voltage value is not correct, check the input voltage. It should be 115VAC. The value reported is NOT the real voltage, it is a reading that represents the voltage the control board is seeing.

- B. If the voltage value is in the correct range, check the REFL value.
 - 1) The REFL value should be between 95 and 100.
 - 2) Press Stop twice.

- 3) If value is out of range, adjust R99 on the control board. Turn clockwise to increase the value, counterclockwise to decrease the value.

NOTE: Readings do not change if you adjust R99 while watching display. The unit must go thru the 15 second test to display a new value. The potentiometer is sensitive so only turn it about 1/8 turn or less at one time.

8. Press Start.
9. After 15 seconds, press Save.
10. Check the values reported on the display.
11. Press Stop twice.
12. Readjust R99 as required.
13. Repeat steps 8 thru 12 until readings are in proper range.
14. Install main housing.

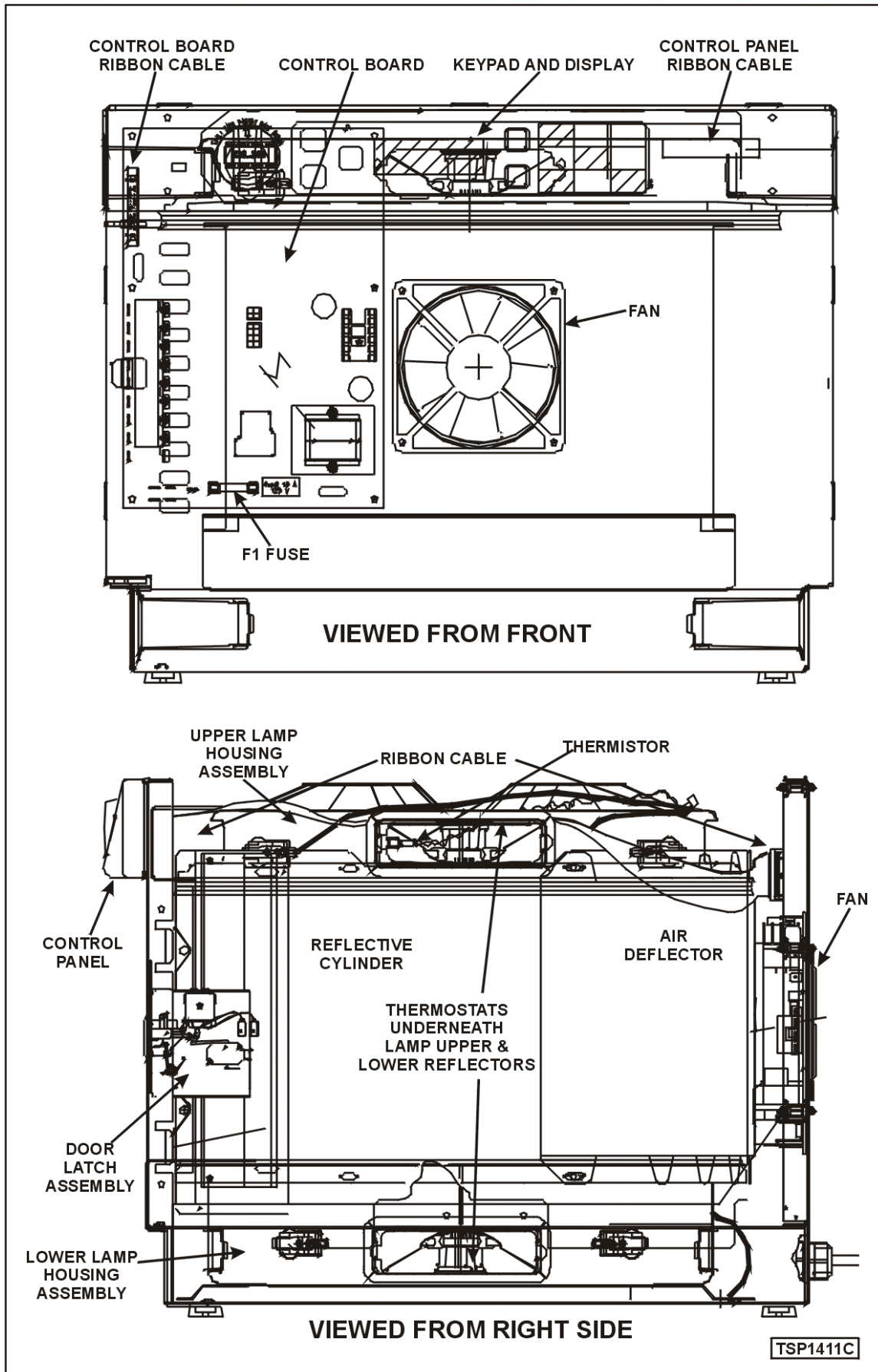
MEMORY CHECK

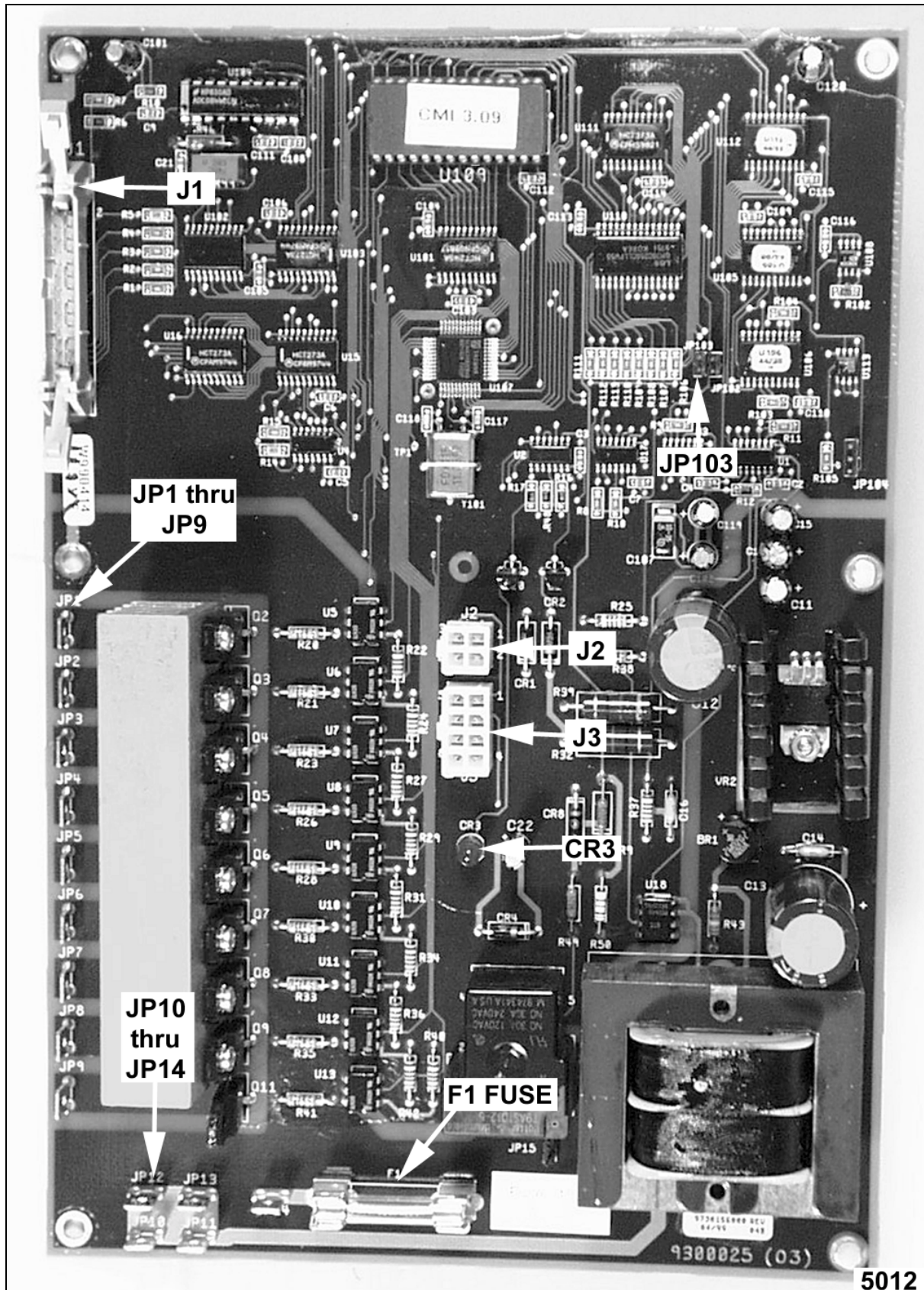
1. Plug unit in.
2. Set knob to Cook position.
3. Set time to 1:00 minute.
4. Press Save.
5. Press the (1) key.
6. Set time to 2:00 minutes.
7. Press Save.
8. Press the (2) key.
9. Continue incrementing the time by one minute, and save it to the next storage number until all nine storage units are filled.
10. Set knob to the Preset position.
11. Press (1) key.
 - A. The unit should start in Cook mode with 1:00 shown on display timer.
12. Press Stop two times.
13. Press the (2) key.
 - A. The unit should start in Cook mode with 2:00 shown on display timer.
14. Press Stop two times.
15. Repeat with all nine storage locations. In each case the unit should start with the appropriate time shown.

ELECTRICAL OPERATION

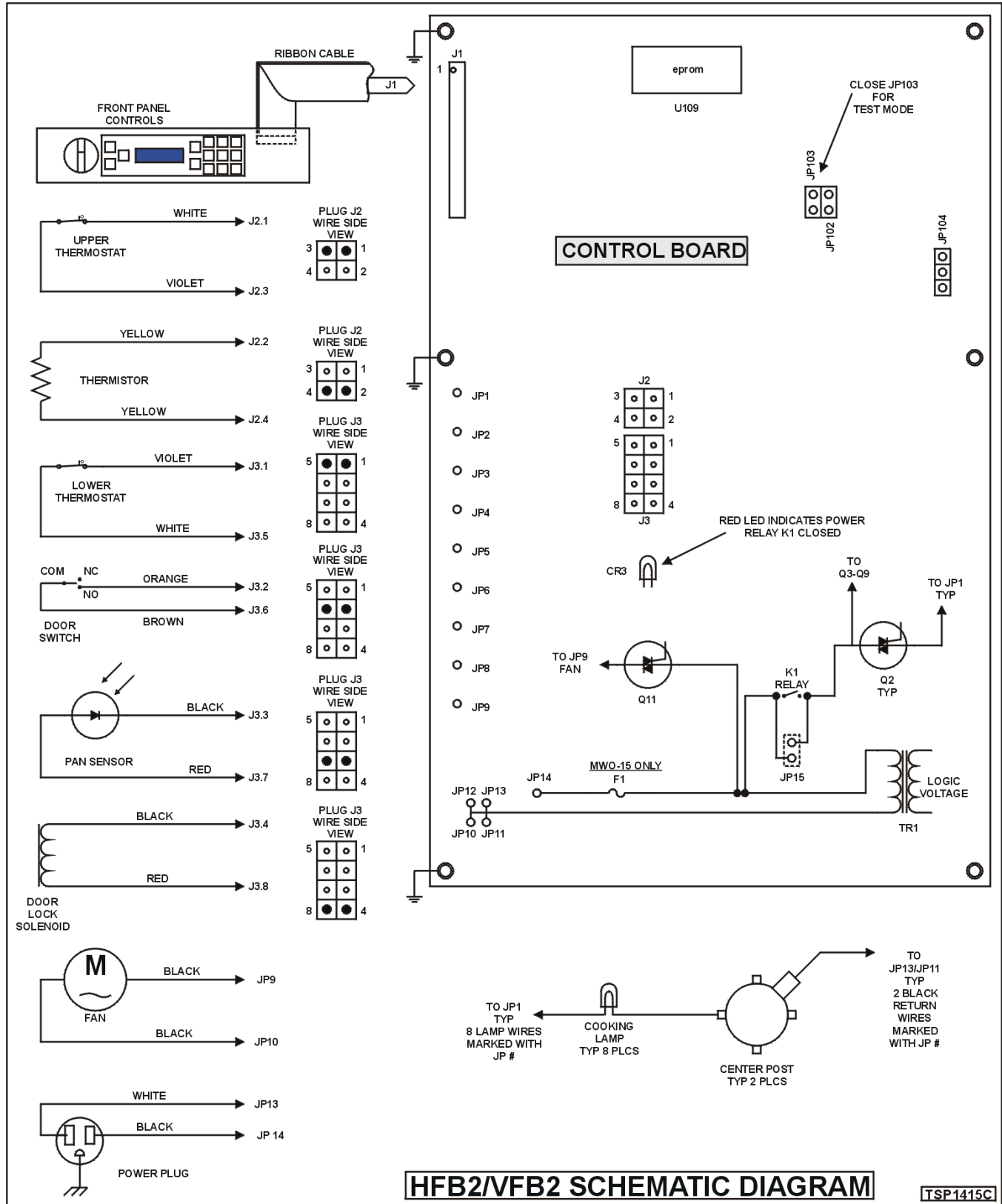
COMPONENT FUNCTION

F1 FUSE	Protects transformer and fan.
FAN	Moves air across lamps to help cool lamp area.
THERMOSTATS	Protects oven cavity from overheating. Monitors temperature in upper lamp housing and in lower lamp housing. Opens at 200°F (± 5); auto reset at 170°F (± 5).
DOOR SWITCH	Prevents oven from operating with door open.
DOOR LOCK SOLENOID	Locks door to prevent door from being opened when in a cook cycle.
CONTROL BOARD	Contains software and other components used to operate the cook cycles.
KEYPAD	Allows information to be sent by operator to the control board.
DISPLAY	Displays information needed by the customer to operate the oven.
THERMISTOR	Signals the control board the temperature in the exhaust duct. The control board then keeps the fan running as needed at the end of a cook cycle to cool the lamps. Also provides information to adjust cooking parameters based on oven temperature.
LAMP	Supplies visible and infrared light used to cook the product.
PAN SENSOR	Signals control board as to the type of pan being used and then the control board adjusts accordingly.

COMPONENT LOCATION

CONTROL BOARD LAYOUT

SCHEMATIC DIAGRAM





SEQUENCE OF OPERATION

1. Conditions
 - A. Correct voltage to oven on control board.
 - B. Power fuse good.
 - C. Building Circuit breakers closed.
 - D. Thermostats closed.
 - E. Door switch closed.
 - F. Product in oven.
2. Display is illuminated because power is applied to control board.
3. Cook cycle selected.
4. Cycle time is entered.
5. "START" key is pressed.
 - A. LED (CR3) on control board is lit.
 - B. Compartment fan energized.
 - C. Door lock solenoid energized.
 - 1) Door locked.
 - D. Lamp power is controlled by control board depending on signals received from pan sensor, thermistor and cooking controls.
 - 1) Lamps are energized.
 - E. Cook cycle timer counts down.
6. If Pause key is pressed, cook cycle stops. (Pressing Start resumes cooking cycle).
 - A. Lamps are de-energized.
 - B. Door lock solenoid de-energized.
 - 1) Door is unlocked.
 - C. Beeper sounds.
 - D. Compartment fan remains energized.
 - E. Cook timer stops counting down.
7. If cook cycle times out or if Stop key is pressed twice, (pressing once puts unit in pause mode) cook cycle stops and resets cook cycle timer to zero.
 - A. Beeper sounds.
 - B. Compartment fan runs as long as control board senses a need to cool compartment down. Can run up to a maximum of 4 minutes.
 - C. LED (CR3) on control board is off.
 - D. Lamps are de-energized.
 - E. Door lock solenoid de-energized.
 - 1) Door is unlocked.

8. Oven reverts back to conditions in step 2.

Operation Monitor

The unit uses the control board to monitor the status of certain points on the oven. If the status of any point is not within normal operating conditions a message is reported and the relay on the control board which powers the lamps may be de-energized.

1. Oven Door - The door must be closed before cooking is allowed. If the door is not closed a message will be displayed.
2. Temperature - If the oven is too hot, cooking is not allowed. A message is displayed and the relay will be de-energized. Temperature is monitored by two thermostats both of which must be satisfied before the oven will cook.

TROUBLESHOOTING

ERROR MESSAGES	
MESSAGE	ACTION
Oven can not operate. Oven is overheated.	<ol style="list-style-type: none"> 1. Check both upper and lower thermostat circuits. If thermostat is opened, control board prevents operation. 2. Check that fan is operational. 3. Check that there is sufficient clearance for air circulation around unit.
Oven can not operate. Door is not closed.	Check door switch circuit.

SYMPTOM	POSSIBLE CAUSES
Oven does not operate.	<ol style="list-style-type: none"> 1. Power cord. 2. Main circuit breaker open. 3. Fuse F1 on control board open. 4. Control board malfunction. 5. Ribbon cable. 6. Control panel circuit board.
Oven does not enter a cook cycle and displays error messages.	Refer to Error Message chart.
Fan continues to run after cook cycle is completed. NOTE: It is normal for fan to run a while (approximately 4 minutes maximum) after a cook cycle ends to cool down lamp housings.	<ol style="list-style-type: none"> 1. Shorted or malfunctioning thermistor. 2. Thermistor not properly located inside upper exhaust duct. It should hang freely in the center of the duct. 3. Unit in Pause Mode. 4. Control board malfunction.
Fan never runs.	<ol style="list-style-type: none"> 1. Fan malfunction. 2. Control board malfunction.
Display does not light up/no characters displayed.	<ol style="list-style-type: none"> 1. Ribbon cable. 2. Control panel circuit board malfunction. 3. Control board malfunction.
You can open door while in a cook cycle.	<ol style="list-style-type: none"> 1. Latch solenoid malfunction. 2. Latch pawl malfunction. 3. Control board malfunction.
Can not set cooking time or enter other keypad information.	<ol style="list-style-type: none"> 1. Ribbon cable. 2. Control panel circuit board malfunction. 3. Control board malfunction.
Door does not latch/close completely.	<ol style="list-style-type: none"> 1. Check for obstructions. Close door again. 2. Misadjusted door latch assembly.
Won't save recipe settings.	Control board malfunction.
Beeper doesn't work.	<ol style="list-style-type: none"> 1. Ribbon cable. 2. Control panel circuit board malfunction. 3. Control board malfunction.
Cooking lights come on and stay on, they don't "rotate".	<ol style="list-style-type: none"> 1. Power polarity wrong at receptacle. 2. Black and white wires incorrectly connected to control board. Black should connect to JP14 and white to JP13. 3. No ground.
Erratic operation of display or display locks up.	<ol style="list-style-type: none"> 1. Power polarity wrong at receptacle. 2. Black and white wires incorrectly connected to control board. Black should connect to JP14 and white to JP13. 3. No ground.